The Plant Journal (2000) **23**(6), 825–829

Author index

Abe, H. *see* Takeuchi, M.
Acarkan, A., Roßberg, M., Koch, M. and Schmidt, R. Comparative genome analysis reveals extensive conservation of genome organisation for *Arabidopsis thaliana* and *Capsella rubella* 55
Ache, P. *see* Deeken, R.
Adams, S. *see* Grant, M.
Ainslie, A. *see* Grant, M.
Akaba, S. *see* Seo, M.
Andersen, C.H. *see* Zhou, F.
Angenent, G.C. *see* Kater, M.M.
Åstot, C. *see* Eklöf, S.
Ayaydin, F., Vissi, E., Mészáros, T., Miskolczi, P., Kovács, I., Fehér, A., Dombrádi, V., Erdődi, F., Gergely, P. and Dudits, D. Inhibition of serine/threonine-specific protein phosphatases causes premature activation of cdc2MsF kinase at G2/M transition and early mitotic microtubule organisation in alfalfa 85

Bakker, J. *see* van der Vossen, E.A.G.
Bancroft, I. *see* O'Neill, C.M.
Barker, K.R. *see* Shen, S.
Baulcombe, D.C. *see* Mestre, P.
Baulcombe, D.C. *see* van der Vossen, E.A.G.
Beaudoin, F., Wilkinson, B.M., Stirling, C.J. and Napier, J.A. *In vivo* targeting of a sunflower oil body protein in yeast secretory (*sec*) mutants 159
Bendahmane, A. *see* van der Vossen, E.A.G.
Berger, N. *see* Dubreucq, B.
Bestwick, C.S. *see* Mur, L.A.J.
Bhalerao, R. *see* Kleinow, T.
Bi, Y.-M. *see* Mur, L.A.J.
Blake, P.S. *see* Thompson, A.J.
Blake-Kalff, M. *see* Takahashi, H.
Boerjan, W. *see* Lacombe, E.
Boisson, M. *see* Dubreucq, B.
Boudet, A.M. *see* Lacombe, E.
Brading, P.A., Hammond-Kosack, K.E., Parr, A. and Jones, J.D.G. Salicyclic acid is not required for *Cf-2*- and *Cf-9*-dependent resistance of tomato to *Cladosporium fulvum* 305
Bressan, R.A. *see* Ibeas, J.I.
Breuer, F. *see* Kleinow, T.
Brigneti, G. *see* Mestre, P.
Brown, I. *see* Grant, M.
Brown, I.R. *see* Mur, L.A.J.
Brown, S. *see* Roudier, F.
Buchanan-Wollaston, V. *see* Morris, K.
Burbidge, A. *see* Thompson, A.J.
Burhenne, K. *see* Zhou, F.

Caboche, M. *see* Dubreucq, B.
Cao, K. *see* Kang, D.
Carr, J.P. *see* Morris, K.
Carter, S.A. *see* Cheng, N.-H.
Casal, J.J. *see* Yanovsky, M.J.
Cheng, N.-H., Su, C.-L., Carter, S.A. and Nelson, R.S. Vascular invasion routes and systemic accumulation patterns of tobacco mosaic virus in *Nicotiana benthamiana* 349
Chérel, I. *see* Urbach, S.
Choi, I-R., Stenger, D.C., Morris, T.J. and French, R. A plant virus vector for systemic expression of foreign genes in cereals 547
Collinge, D.B. *see* Zhou, F.
Conlan, R.S. *see* Gälweiler, L.
Cornelissen, B.J.C. *see* Mes, J.J.
Coursol, S., Giglioli-Guivarc'h, N., Vidal, J. and Pierre, J-N. An increase in phosphoinositide-specific phospholipase C activity precedes induction of C_4 phosphoenolpyruvate carboxylase phosphorylation in illuminated and NH_4Cl-treated protoplasts from *Digitaria sanguinalis* 497
Croker, S.J. *see* Curtis, I.S.
Curtis, I.S., Ward, D.A., Thomas, S.G., Phillips, A.L., Davey, M.R., Power, J.B., Lowe, K.C., Croker, S.J., Lewis, M.J., Magness, S.L. and Hedden, P. Induction of dwarfism in transgenic *Solanum dulcamara* by over-expression of a gibberellin 20-oxidase cDNA from pumpkin 329

Dadswell, A.R. *see* Thompson, A.J.
Damsz, B. *see* Ibeas, J.I.
Daniel-Vedele, F. *see* Fraisier, V.
Darby, R.M. *see* Mur, L.A.J.
Davey, M.R. *see* Curtis, I.S.
Dazzo, F.B. *see* Wopereis, J.
de Bruijn, F.J. *see* Wopereis, J.
de Wit, P.J.G.M. *see* Laugé, R.
Deeken, R., Sanders, C., Ache, P. and Hedrich, R. Developmental and light-dependent regulation of a phloem-localised K^+ channel of *Arabidopsis thaliana* 285
Deng, X.-W. *see* Kang, D.
Dhindsa, R.S. *see* Örvar, B.L.
Dhondt, S., Geoffroy, P., Stelmach, B.A., Legrand, M. and Heitz, T. Soluble phospholipase A_2 activity is induced before oxylipin accumulation in tobacco mosaic virus-infected tobacco leaves and is contributed by patatin-like enzymes 431
Dixon, R.A. *see* Korth, K.L.
Dombrádi, V. *see* Ayaydin, F.
Draper, C.K. and Hays, J.B. Replication of chloroplast, mitochondrial and nuclear DNA during growth of unirradiated and UVB-irradiated *Arabidopsis* leaves 255
Draper, J. *see* Mur, L.A.J.
Draper, O. *see* Zupan, J.
Dubreucq, B., Berger, N., Vincent, E., Boisson, M., Pelletier, G., Caboche, M. and Lepiniec, L. The *Arabidopsis AtEPR1* extensin-like gene is specifically expressed in endosperm during seed germination 643
Dudits, D. *see* Ayaydin, F.
Durner, J. *see* Foissner, I.

Edwards, D. *see* Hanley, S.
Edwards, K.J. *see* Hanley, S.
Eklöf, S., Åstot, C., Sitbon, F., Moritz, T., Olsson, O. and Sandberg, G. Transgenic tobacco plants co-expressing *Agrobacterium iaa* and *ipt* genes have wild-type hormone levels but display both auxin- and cytokinin-overproducing phenotypes 279
Emmermann, M. *see* Tauberger, E.
Engler, G. *see* Hemerly, A.S.
Erdődi, F. *see* Ayaydin, F.

© 2000 Blackwell Science Ltd

Fajkus, J. *see* Riha, K.
Fedorova, E. *see* Roudier, F.
Fehér, A. *see* Ayaydin, F.
Feher, A. *see* Roudier, F.
Fernie, A.R. *see* Tauberger, E.
Ferreira, P.C.G. *see* Hemerly, A.S.
Flavell, R.B. *see* Metzlaff, M.
Flügge, U.-I. *see* Gutensohn, M.
Foissner, I., Wendehenne, D., Langebartels, C. and Durner, J. *In vivo* imaging of an elicitor-induced nitric oxide burst in tobacco 817
Fraisier, V., Gojon, A., Tillard, P. and Daniel-Vedele, F. Constitutive expression of a putative high-affinity nitrate transporter in *Nicotiana plumbaginifolia*: evidence for post-transcriptional regulation by a reduced nitrogen source 489
Franken, J. *see* Kater, M.M.
Franklin, F.C.H. *see* Jordan, N.D.
Franklin-Tong, V.E. *see* Jordan, N.D.
French, R. *see* Choi, I-R.
Fujita, M. *see* Liu, Y.-G.

Galili, G. *see* Tang, G.
Gälweiler, L., Conlan, R.S., Mader, P., Palme, K. and Moore, I. The DNA-binding activity of Gal4 is inhibited by methylation of the Gal4 binding site in plant chromatin 143
Gardeström, P. *see* Strand, Å.
Gatz, C. *see* Yanovsky, M.J.
Gaymard, F. *see* Urbach, S.
Geigenberger, P. and Stitt, M. Diurnal changes in sucrose, nucleotides, starch synthesis and *AGPS* transcript in growing potato tubers that are suppressed by decreased expression of sucrose phosphate synthase 795
Geoffroy, P. *see* Dhondt, S.
Gergely, P. *see* Ayaydin, F.
Gibson, S.I. *see* Laby, R.J.
Gidoni, D. *see* Luo, H.
Giglioli-Guivarc'h, N. *see* Coursol, S.
Gojon, A. *see* Fraisier, V.
Gonzàlez-Meler, M.A. *see* Millenaar, F.F.
Goodwin, P.H. *see* Laugé, R.
Grant, M., Brown, I., Adams, S., Knight, M., Ainslie, A. and Mansfield, J. The *RPM1* plant disease resistance gene facilitates a rapid and sustained increase in cytosolic calcium that is necessary for the oxidative burst and hypersensitive cell death 441
Grasser, K.D. *see* Röttgers, K.
Gresshoff, P.M. *see* Wopereis, J.
Grima-Pettenati, J. *see* Lacombe, E.
Gustafsson, P. *see* Strand, Å.
Gutensohn, M., Schulz, B., Nicolay, P. and Flügge, U.-I. Functional analysis of the two *Arabidopsis* homologues of Toc34, a component of the chloroplast protein import apparatus 771
Györgyey, J. *see* Roudier, F.

Haines, S. *see* Hanley, S.
Halliday, K.J. *see* Huq, E.
Hammond-Kosack, K.E. *see* Brading, P.A.
Hanley, S., Edwards, D., Stevenson, D., Haines, S., Hegarty, M., Schuch, W. and Edwards, K.J. Identification of transposon-tagged genes by the random sequencing of *Mutator*-tagged DNA fragments from *Zea mays* 557
Hannah, L.C. *see* Maitz, M.
Harada, K. *see* Wu, C-Y.
Haring, M.A. *see* Mes, J.J.
Hasegawa, P.M. *see* Ibeas, J.I.
Haseloff, J. *see* Kiegle, E.
Hata, S. *see* Saijo, Y.
Hawkesford, M.J. *see* Takahashi, H.
Hays, J.B. *see* Draper, C.K.
He, S.-Y. *see* Shen, S.
Hedden, P. *see* Curtis, I.S.
Hedrich, R. *see* Deeken, R.
Hegarty, M. *see* Hanley, S.
Heitz, T. *see* Dhondt, S.
Hellens, R. *see* Metzlaff, M.
Hemerly, A.S., Ferreira, P.C.G., Van Montagu, M., Engler, G. and Inzé, D. Cell division events are essential for embryo patterning and morphogenesis: studies on dominant-negative *cdc2aAt* mutants of *Arabidopsis* 123
Hertz Fischer, P. *see* Zhou, F.
Hesse, H. *see* Maimann, S.
Hirochika, H. *see* Okamoto, H.
Hodges, T.K. *see* Luo, H.
Höfgen, R. *see* Maimann, S.
Holsters, M. and Zabeau, M. Ten years dedicated to the Laboratory of Genetics, Gent 3
Hrdý, I. *see* Smýkal, P.
Huijser, C., Kortstee, A., Pego, J., Weisbeek, P., Wisman, E. and Smeekens, S. The *Arabidopsis SUCROSE UNCOUPLED-6* gene is identical to *ABSCISIC ACID INSENSITIVE-4*: involvement of abscisic acid in sugar responses 577
Hunt, A.G. *see* Shen, S.
Huq, E., Kang, Y., Halliday, K.J., Qin, M. and Quail, P.H. *SRL1*: a new locus specific to the phyB-signaling pathway in *Arabidopsis* 461

Ibeas, J.I., Lee, H., Damsz, B., Prasad, D.T., Pardo, J.M., Hasegawa, P.M., Bressan, R.A. and Narasimhan, M.L. Fungal cell wall phosphomannans facilitate the toxic activity of a plant PR-5 protein 375
Inzé, D. *see* Hemerly, A.S.
Isshiki, M., Nakajima, M., Satoh, H. and Shimamoto, K. *dull*: rice mutants with tissue-specific effects on the splicing of the *waxy* pre-mRNA 451
Izaguirre, M. *see* Yanovsky, M.J.
Izui, K. *see* Saijo, Y.

Jackson, A.C. *see* Thompson, A.J.
Jackson, S.D. *see* Yanovsky, M.J.
Jaggard, D.A.W. *see* Korth, K.L.
Jiang, Q. *see* Wopereis, J.
John, C.F. *see* Morris, K.
Jones, J.D.G. *see* Brading, P.A.
Joosten, M.H.A.J. *see* Laugé, R.
Jordan, N.D., Franklin, F.C.H. and Franklin-Tong, V.E. Evidence for DNA fragmentation triggered in the self-incompatibility response in pollen of *Papaver rhoeas* 471

Kakimoto, T. *see* Kubo, M.
Kamiya, Y. *see* Seo, M.
Kang, D., Wang, X., Cao, K., Sun, C., Deng, X.-W. and Wei, N. A gain-of-function phenotype conferred by over-expression of functional subunits of the COP9 signalosome in *Arabidopsis* 597
Kang, Y. *see* Huq, E.
Kanyuka, K. *see* van der Vossen, E.A.G.
Kater, M.M., Franken, J., van Aelst, A. and Angenent, G.C. Suppression of cell expansion by ectopic expression of the

Arabidopsis SUPERMAN gene in transgenic petunia and tobacco 407
Kawaura, K. *see* Liu, Y.-G.
Kiegle, E., Moore, C.A., Haseloff, J., Tester, M.A. and Knight, M.R. Cell-type-specific calcium responses to drought, salt and cold in the *Arabidopsis* root 267
Kim, D. *see* Laby, R.J.
Kincaid, M.S. *see* Laby, R.J.
Kiyosue, T. and Wada, M. LKP1 (LOV kelch protein 1): a factor involved in the regulation of flowering time in Arabidopsis 807
Klein-Lankhorst, R.M. *see* van der Vossen, E.A.G.
Kleinow, T., Bhalerao, R., Breuer, F., Umeda, M., Salchert, K. and Koncz, C. Functional identification of an *Arabidopsis* Snf4 ortholog by screening for heterologous multicopy suppressors of *snf4* deficiency in yeast 115
Klessig, D.F. *see* Zhang, S.
Knight, M. *see* Grant, M.
Knight, M.R. *see* Kiegle, E.
Koch, M. *see* Acarkan, A.
Koiwai, H. *see* Seo, M.
Komano, T. *see* Seo, M.
Koncz, C. *see* Kleinow, T.
Kondorosi, A. *see* Roudier, F.
Kondorosi, E. *see* Roudier, F.
Konopásek, I. *see* Smýkal, P.
Kopka, J. *see* Roessner, U.
Korth, K.L., Jaggard, D.A.W. and Dixon, R.A. Developmental and light-regulated post-translational control of 3-hydroxy-3-methylglutaryl-CoA reductase levels in potato 507
Kortstee, A. *see* Huijser, C.
Koshiba, T. *see* Seo, M.
Koshinsky, H.A., Lee, E. and Ow, D.W. Cre-*lox* site-specific recombination between *Arabidopsis* and tobacco chromosomes 715
Kossman, J. *see* Tauberger, E.
Kovács, I. *see* Ayaydin, F.
Kreft, O. *see* Maimann, S.
Krohn, N.M. *see* Röttgers, K.
Kubo, M. and Kakimoto, T. The *CYTOKININ-HYPERSENSITIVE* genes of *Arabidopsis* negatively regulate the cytokinin-signaling pathway for cell division and chloroplast development 385
Kyozuka, J. *see* Saijo, Y.

Laby, R.J., Kincaid, M.S., Kim, D. and Gibson, S.I. The *Arabidopsis* sugar-insensitive mutants *sis4* and *sis5* are defective in abscisic acid synthesis and response 587
Lacombe, E., Van Doorsselaere, J., Boerjan, W., Boudet, A.M. and Grima-Pettenati, J. Characterization of *cis*-elements required for vascular expression of the *Cinnamoyl CoA Reductase* gene and for protein–DNA complex formation 663
Lal, S. *see* Maitz, M.
Lambers, H. *see* Millenaar, F.F.
Langebartels, C. *see* Foissner, I.
Laugé, R., Goodwin, P.H., de Wit, P.J.G.M. and Joosten, M.H.A.J. Specific HR-associated recognition of secreted proteins from *Cladosporium fulvum* occurs in both host and non-host plants 735
Lee, E. *see* Koshinsky, H.A.
Lee, H. *see* Ibeas, J.I.
Legrand, M. *see* Dhondt, S.
Lepiniec, L. *see* Dubreucq, B.
Leubner-Metzger, G. and Meins Jr, F. Sense transformation reveals a novel role for class I β-1,3-glucanase in tobacco seed germination 215
Lewis, M.J. *see* Curtis, I.S.
Li, D. *see* Shen, S.
Li, Q. *see* Shen, S.
Lichota, J. *see* Röttgers, K.
Liu, Y. *see* Zhang, S.
Liu, Y.-G., Nagaki, K., Fujita, M., Kawaura, K., Uozumi, M. and Ogihara, Y. Development of an efficient maintenance and screening system for large-insert genomic DNA libraries of hexaploid wheat in a transformation-competent artificial chromosome (TAC) vector 687
Lowe, K.C. *see* Curtis, I.S.
Luo, H., Lyznik, L.A., Gidoni, D. and Hodges, T.K. FLP-mediated recombination for use in hybrid plant production 423
Lyznik, L.A. *see* Luo, H.

Mackerness, S.A-.H. *see* Morris, K.
Mader, P. *see* Gälweiler, L.
Magness, S.L. *see* Curtis, I.S.
Maimann, S., Wagner, C., Kreft, O., Zeh, M., Willmitzer, L., Höfgen, R. and Hesse, H. Transgenic potato plants reveal the indispensable role of cystathionine β-lyase in plant growth and development 747
Maitz, M., Santandrea, G., Zhang, Z., Lal, S., Hannah, L.C., Salamini, F. and Thompson, R.D. *rfg1*, a mutation reducing grain filling in maize through effects on basal endosperm and pedicel development 29
Mansfield, J. *see* Grant, M.
Mansfield, J.W. *see* Mur, L.A.J.
Masín, J. *see* Smýkal, P.
Masuta, C., Yamana, T., Tacahashi, Y., Uyeda, I., Sato, M., Ueda, S. and Matsumura, T. Development of clover yellow vein virus as an efficient, stable gene-expression system for legume species 539
Matsumura, T. *see* Masuta, C.
McKnight, T.D. *see* Riha, K.
Meins Jr, F. *see* Leubner-Metzger, G.
Merkle, T. *see* Röttgers, K.
Mes, J.J., van Doorn, A.A., Wijbrandi, J., Simons, G., Cornelissen, B.J.C. and Haring, M.A. Expression of the *Fusarium* resistance gene *I-2* colocalizes with the site of fungal containment 183
Mestre, P., Brigneti, G. and Baulcombe, D.C. An *Ry*-mediated resistance response in potato requires the intact active site of the Nla proteinase from potato virus Y 653
Mészáros, T. *see* Ayaydin, F.
Metzlaff, M., O'Dell, M., Hellens, R. and Flavell, R.B. Developmentally and transgene regulated nuclear processing of primary transcripts of *chalcone synthase A* in petunia 63
Millenaar, F.F., Roelofs, R., Gonzàlez-Meler, M.A., Siedow, J.M., Wagner, A.M. and Lambers, H. The alternative oxidase in roots of *Poa annua* after transfer from high-light to low-light conditions 623
Miskolczi, P. *see* Ayaydin, F.
Moore, C.A. *see* Kiegle, E.
Moore, I. *see* Gälweiler, L.
Moritz, T. *see* Eklöf, S.
Morris, K., Mackerness, S.A-.H., Page, T., John, C.F., Murphy, A.M., Carr, J.P. and Buchanan-Wollaston, V. Salicyclic acid has a role in regulating gene expression during leaf senescence 677
Morris, T.J. *see* Choi, I-R.

Mulholland, B.J. *see* Thompson, A.J.
Mur, L.A.J., Brown, I.R., Darby, R.M., Bestwick, C.S., Bi, Y.-M., Mansfield, J.W. and Draper, J. A loss of resistance to avirulent bacterial pathogens in tobacco is associated with the attenuation of a salicylic acid-potentiated oxidative burst 609
Murphy, A.M. *see* Morris, K.
Muth, T.R. *see* Zupan, J.

Nagaki, K. *see* Liu, Y.-G.
Nagata, T. *see* Takeuchi, M.
Nakajima, M. *see* Isshiki, M.
Nakano, A. *see* Takeuchi, M.
Napier, J.A. *see* Beaudoin, F.
Narasimhan, M.L. *see* Ibeas, J.I.
Nelson, R.S. *see* Cheng, N.-H.
Nicolay, P. *see* Gutensohn, M.

O'Dell, M. *see* Metzlaff, M.
O'Neill, C.M. and Bancroft, I. Comparative physical mapping of segments of the genome of *Brassica oleracea* var. *alboglabra* that are homoeologous to sequenced regions of chromosomes 4 and 5 of *Arabidopsis thaliana* 233
Ogihara, Y. *see* Liu, Y.-G.
Okamoto, H. and Hirochika, H. Efficient insertion mutagenesis of *Arabidopsis* by tissue culture-induced activation of the tobacco retrotransposon *Tto1* 291
Olsson, O. *see* Eklöf, S.
Omann, F. *see* Őrvar, B.L.
Onodera, Y. *see* Wu, C-Y.
Oritani, T. *see* Seo, M.
Örvar, B.L., Sangwan, V., Omann, F. and Dhindsa, R.S. Early steps in cold sensing by plant cells: the role of actin cytoskeleton and membrane fluidity 785
Ow, D.W. *see* Koshinsky, H.A.

Page, T. *see* Morris, K.
Pajuelo, E. *see* Wopereis, J.
Palme, K. *see* Gälweiler, L.
Pardo, J.M. *see* Ibeas, J.I.
Parr, A. *see* Brading, P.A.
Pego, J. *see* Huijser, C.
Pelletier, G. *see* Dubreucq, B.
Perbal, M.-C. *see* Zachgo, S.
Phillips, A.L. *see* Curtis, I.S.
Pierre, J-N. *see* Coursol, S.
Power, J.B. *see* Curtis, I.S.
Prasad, D.T. *see* Ibeas, J.I.

Qin, M. *see* Huq, E.
Quail, P.H. *see* Huq, E.

Renz, A. *see* Tauberger, E.
Riha, K., McKnight, T.D., Fajkus, J., Vyskot, B. and Shippen, D.E. Analysis of the G-overhang structures on plant telomeres: evidence for two distinct telomere architectures 633
Roelofs, R. *see* Millenaar, F.F.
Roessner, U., Wagner, C., Kopka, J., Trethewey, R.N. and Willmitzer, L. Simultaneous analysis of metabolites in potato tuber by gas chromatography–mass spectrometry 131
Roßberg, M. *see* Acarkan, A.
Röttgers, K., Krohn, N.M., Lichota, J., Stemmer, C., Merkle, T. and Grasser, K.D. DNA-interactions and nuclear localisation of the chromosomal HMG domain protein SSRP1 from maize 395
Roudier, F., Fedorova, E., Györgyey, J., Feher, A., Brown, S., Kondorosi, A. and Kondorosi, E. Cell cycle function of a *Medicago sativa* A2-type cyclin interacting with a PSTAIRE-type cyclin-dependent kinase and a retinoblastoma protein 73
Rouppe van der Voort, J.N.A.M. *see* van der Vossen, E.A.G.

Saedler, H. *see* Zachgo, S.
Saijo, Y., Hata, S., Kyozuka, J., Shimamoto, K. and Izui, K. Over-expression of a single Ca^{2+}-dependent protein kinase confers both cold and salt/drought tolerance on rice plants 319
Saito, K. *see* Takahashi, H.
Salamini, F. *see* Maitz, M.
Salchert, K. *see* Kleinow, T.
Sandberg, G. *see* Eklöf, S.
Sandbrink, H. *see* van der Vossen, E.A.G.
Sanders, C. *see* Deeken, R.
Sangwan, V. *see* Örvar, B.L.
Santandrea, G. *see* Maitz, M.
Sato, K. *see* Takeuchi, M.
Sato, M. *see* Masuta, C.
Satoh, H. *see* Isshiki, M.
Schmidt, R. *see* Acarkan, A.
Schuch, W. *see* Hanley, S.
Schulz, B. *see* Gutensohn, M.
Schwarz-Sommer, Z. *see* Zachgo, S.
Sentenac, H. *see* Urbach, S.
Seo, M., Koiwai, H., Akaba, S., Komano, T., Oritani, T., Kamiya, Y. and Koshiba, T. Abscisic aldehyde oxidase in leaves of *Arabidopsis thaliana* 481
Shen, S., Li, Q., He, S.-Y., Barker, K.R., Li, D. and Hunt, A.G. Conversion of compatible plant–pathogen interactions into incompatible interactions by expression of the *Pseudomonas syringae* pv. *syringae* 61 *hrmA* gene in transgenic tobacco plants 205
Shimamoto, K. *see* Isshiki, M.
Shimamoto, K. *see* Saijo, Y.
Shippen, D.E. *see* Riha, K.
Siedow, J.M. *see* Millenaar, F.F.
Simons, G. *see* Mes, J.J.
Sitbon, F. *see* Eklöf, S.
Smeekens, S. *see* Huijser, C.
Smith, F.W. *see* Takahashi, H.
Smýkal, P., Mašín, J., Hrdý, I., Konopásek, I. and Žárský, V. Chaperone activity of tobacco HSP18, a small heat shock protein, is inhibited by ATP 703
Starlinger, P. Jeff Schell in Cologne 7
Stelmach, B.A. *see* Dhondt, S.
Stemmer, C. *see* Röttgers, K.
Stenger, D.C. *see* Choi, I-R.
Stevenson, D. *see* Hanley, S.
Stiekema, W.J. *see* van der Vossen, E.A.G.
Stirling, C.J. *see* Beaudoin, F.
Stitt, M. *see* Geigenberger, P.
Stitt, M. *see* Strand, Å.
Stougaard, J. *see* Wopereis, J.
Strand, Å., Zrenner, R., Trevanion, S., Stitt, M., Gustafsson, P. and Gardeström, P. Decreased expression of two key enzymes in the sucrose biosynthesis pathway, cytosolic fructose-1,6-bisphosphatase and sucrose phosphate synthase, has remarkably different consequences for photosynthetic carbon metabolism in transgenic *Arabidopsis thaliana* 759
Su, C.-L. *see* Cheng, N.-H.
Sun, C. *see* Kang, D.

Symonds, R.C. *see* Thompson, A.J.
Szczyglowski, K. *see* Wopereis, J.

Tacahashi, Y. *see* Masuta, C.
Takahashi, H., Watanabe-Takahashi, A., Smith, F.W., Blake-Kalff, M., Hawkesford, M.J. and Saito, K. The roles of three functional sulphate transporters involved in uptake and translocation of sulphate in *Arabidopsis thaliana* 171
Takaiwa, F. *see* Wu, C-Y.
Takeuchi, M., Ueda, T., Sato, K., Abe, H., Nagata, T. and Nakano, A. A dominant negative mutant of Sar1 GTPase inhibits protein transport from the endoplasmic reticulum to the Golgi apparatus in tobacco and *Arabidopsis* cultured cells 517
Tang, G., Zhu, X., Tang, X. and Galili, G. A novel composite locus of *Arabidopsis* encoding two polypeptides with metabolically related but distinct functions in lysine catabolism 195
Tang, X. *see* Tang, G.
Tauberger, E., Fernie, A.R., Emmermann, M., Renz, A., Kossman, J., Willmitzer, L. and Trethewey, R.N. Antisense inhibition of plastidial phosphoglucomutase provides compelling evidence that potato tuber amyloplasts import carbon from the cytosol in the form of glucose-6-phosphate 43
Taylor, I.B. *see* Thompson, A.J.
Tegeler, A. *see* Wendt, U.K.
Tester, M.A. *see* Kiegle, E.
Thomas, B. *see* Yanovsky, M.J.
Thomas, S.G. *see* Curtis, I.S.
Thompson, A.J., Jackson, A.C., Symonds, R.C., Mulholland, B.J., Dadswell, A.R., Blake, P.S., Burbidge, A. and Taylor, I.B. Ectopic expression of a tomato 9-*cis*-epoxycarotenoid dioxygenase gene causes over-production of abscisic acid 363
Thompson, R.D. *see* Maitz, M.
Thordal-Christensen, H. *see* Zhou, F.
Tillard, P. *see* Fraisier, V.
Trethewey, R.N. *see* Roessner, U.
Trethewey, R.N. *see* Tauberger, E.
Trevanion, S. *see* Strand, Å.

Ueda, S. *see* Masuta, C.
Ueda, T. *see* Takeuchi, M.
Umeda, M. *see* Kleinow, T.
Uozumi, M. *see* Liu, Y.-G.
Urbach, S., Chérel, I., Sentenac, H. and Gaymard, F. Biochemical characterization of the *Arabidopsis* K^+ channels KAT1 and AKT1 expressed or co-expressed in insect cells 527
Uyeda, I. *see* Masuta, C.

van Aelst, A. *see* Kater, M.M.
van der Vossen, E.A.G., Rouppe van der Voort, J.N.A.M., Kanyuka, K., Bendahmane, A., Sandbrink, H., Baulcombe, D.C., Bakker, J., Stiekema, W.J. and Klein-Lankhorst, R.M. Homologues of a single resistance-gene cluster in potato confer resistance to distinct pathogens: a virus and a nematode 567
van Doorn, A.A. *see* Mes, J.J.
Van Doorsselaere, J. *see* Lacombe, E.
Van Montagu, M. *see* Hemerly, A.S.
Van Montagu, M. The early years 1
Vidal, J. *see* Coursol, S.
Vincent, E. *see* Dubreucq, B.
Vissi, E. *see* Ayaydin, F.
von Schaewen, A. *see* Wendt, U.K.
Vyskot, B. *see* Riha, K.

Wada, M. *see* Kiyosue, T.
Wagmaister, J.A. *see* Yanovsky, M.J.
Wagner, A.M. *see* Millenaar, F.F.
Wagner, C. *see* Maimann, S.
Wagner, C. *see* Roessner, U.
Wang, X. *see* Kang, D.
Ward, D.A. *see* Curtis, I.S.
Washida, H. *see* Wu, C-Y.
Watanabe-Takahashi, A. *see* Takahashi, H.
Wei, N. *see* Kang, D.
Weisbeek, P. *see* Huijser, C.
Wendehenne, D. *see* Foissner, I.
Wenderoth, I. *see* Wendt, U.K.
Wendt, U.K., Wenderoth, I., Tegeler, A. and von Schaewen, A. Molecular characterization of a novel glucose-6-phosphate dehydrogenase from potato (*Solanum tuberosum* L.) 723
Wijbrandi, J. *see* Mes, J.J.
Wilkinson, B.M. *see* Beaudoin, F.
Willmitzer, L. *see* Maimann, S.
Willmitzer, L. *see* Roessner, U.
Willmitzer, L. *see* Tauberger, E.
Wisman, E. *see* Huijser, C.
Wopereis, J., Pajuelo, E., Dazzo, F.B., Jiang, Q., Gresshoff, P.M., de Bruijn, F.J., Stougaard, J. and Szczyglowski, K. Short root mutant of *Lotus japonicus* with a dramatically altered symbiotic phenotype 97
Wu, C-Y., Washida, H., Onodera, Y., Harada, K. and Takaiwa, F. Quantitative nature of the Prolamin-box, ACGT and AACA motifs in a rice glutelin gene promoter: minimal *cis*-element requirements for endosperm-specific gene expression 415

Yamana, T. *see* Masuta, C.
Yanovsky, M.J., Izaguirre, M., Wagmaister, J.A., Gatz, C., Jackson, S.D., Thomas, B. and Casal, J.J. Phytochrome A resets the circadian clock and delays tuber formation under long days in potato 223

Zabeau, M. *see* Holsters, M.
Zachgo, S., Perbal, M.-C., Saedler, H. and Schwarz-Sommer, Z. *In situ* analysis of RNA and protein expression in whole mounts facilitates detection of floral gene expression dynamics 697
Zambryski, P. *see* Zupan, J.
Zárský, V. *see* Smýkal, P.
Zeh, M. *see* Maimann, S.
Zhang, S., Liu, Y. and Klessig, D.F. Multiple levels of tobacco WIPK activation during the induction of cell death by fungal elicitins 339
Zhang, Z. *see* Maitz, M.
Zhou, F., Andersen, C.H., Burhenne, K., Hertz Fischer, P., Collinge, D.B. and Thordal-Christensen, H. Proton extrusion is an essential signalling component in the HR of epidermal single cells in the barley–powdery mildew interaction 245
Zhu, X. *see* Tang, G.
Zrenner, R. *see* Strand, Å.
Zupan, J., Muth, T.R., Draper, O. and Zambryski, P. The transfer of DNA from *Agrobacterium tumefaciens* into plants: a feast of fundamental insights 11

The Plant Journal (2000) **23**(6), 831–833

Subject index

abscisic acid 215, 363, 481, 577, 587
actin 785
aequorin 267
after-ripening 215
aldehyde oxidase 481
alternative oxidase 623
alternative splicing 451
amyloplast 43
anthocyanin 597
Antirrhinum majus 697
antisense 423
apical–basal pattern 123
apoptosis 205
Arabidopsis 233, 255, 385, 423, 461, 527, 587, 677, 715, 759, 771, 807
Arabidopsis thaliana 55, 171, 291, 481, 633
assimilation 29
ATP 703
A-type cyclins 73
avr 205

β-1,3-glucanase 215
BACs 233
binary P1 phage 687
bis-ANS fluorescence 703
Blumeria graminis 245
Brassica 233
Brassicaceae 55

C_4 plant 497
calcium 267, 441
callus 385
carbon metabolism 759
catechol 305
Cdc2-related kinase 85
Cdk activity 73
CDPK 319
cell cycle regulation 73
cell death 677
cell division 123
cell expansion 407
cell wall 375
cereals 547
chalcone synthase A 63
channel 527
chloroplast 771
chloroplast DNA 255
chromatin 395
chromosome condensation 85
cinnamoyl CoA reductase 663
circadian rhythms 223
cis-element 415
9-*cis*-epoxycarotenoid dioxygenase 363
ckh1 385
ckh2 385
Cladosporium fulvum 305
clover yellow vein virus 539
cold 319
cold acclimatization 785
comparative mapping 55
composite locus 195
confocal laser scanning microscopy 349, 817
COP9 signalosome 597
co-suppression 63
CpG 143
Cre-*lox* recombination 715
cryptogein 817
cystathionine 747
cystathionine β-lyase 747
cytokinin 279, 385
cytokinin hypersensitive mutants 385
cytosolic fructose-1,6-bisphosphatase 759

development 285
disease resistance 205, 305, 567
diurnal 795
DNA-binding 395
DNA fragmentation 471
DNA replication 255, 633
DNA structure 395
dominant mutation 517
dominant negative *cdc2a* mutant 123
drought 319
ds RNA 63
dwarfism 329

elicitin 339
elicitor 735
embryogenesis 123
endodermis 267
endoplasmic reticulum 159
endosperm 29, 643
endosperm-limited seed germination 215
endothall 85
entrainment 223
epitope-tagging 507
ER-to-Golgi transport 517
essential amino acids 195
Eucalyptus 663
evolution conservation 597
expression 723
extensin 643
extreme resistance 653

flanking sequence 291
flower development 697
flowering time 807
FLP/*FRT* 423
fluorescence 817
fungal 375
Fusarium oxysporum 183
fusicoccin 245

GA 20-oxidase 329
Gal4 143
GAL4 267
GC-MS 131, 747
gene expression 395, 677
gene function 215
gene regulation 63, 415
gene screening 687
gene-for-gene 567, 735

© 2000 Blackwell Science Ltd

gene-for-gene interaction 653
genome colinearity 55
genome organisation 55, 233
genomic library 687
germination 643
GFP 267, 539
gibberellin 329, 643
glucose signaling 115
glucose-6-phosphate 43
glucose-6-phosphate dehydrogenase 723
glutamine synthetase 539
glutelin 415
green fluorescent protein 171, 349
guttation 363

H_2O_2 245
heat shock 703
hexaploid wheat 687
high mobility group (HMG) domain 395
high-affinity 489
homocysteine 747
hrp 205
hybrid 423
hypersensitive 461
hypersensitive response 205, 245, 431, 441, 817
hypocotyl 597
hypotyl elongation 807

IAA 279
immunolocalization 73, 697
in situ hybridization 697
inositol-1,4,5-trisphosphate 497
insect cells 527
insensitive 587
isoenzymes 723
isoprenoid 507

jasmonate 431

K^+ channel 285
kinetic parameters 723

leaf development 507
leaf senescence 677
legume plants 539
light response 507, 597
light-regulated 285
lignin 663
LKP1 807
long distance transport 349
LOV domain 807
Lycopersicon esculentum 183
Lycopersicon pimpinellifolium 735
lysine catabolism 195
lysine-ketoglutarate reductase 195

macromolecular trafficking 349
male-sterility 423
mannan 375
MAP kinases 339
map-based cloning 567
Medicago sativa 73
Medicago sativa L. 85
membrane fluidity 785
metabolite 131
methionine biosynthesis 747
methoximation 131
methylation 143
microsynteny 55
mitochondrial DNA 255
molecular chaperone 703
molybdenum cofactor (Moco) 481
monocotyledonous plants 547
morphogenesis 123
morphology 279
mutant 587
Mutator 557
MYB factors 663

Nicotiana paniculata 735
Nicotiana plumbaginifolia 489
Nicotiana tabacum 279
Nicotiana 715
nitrate transport 489
nitric oxide 817
NIa proteinase 653
nodulation 97
nuclear DNA 255
nucleur localisation 395

oil body 159
oleosin 159
oxidative burst 609, 817
oxylipins 431

Papaver rhoeas 471
patatin 431
pathogenesis-related protein 375
petals 407
petunia 407
pH 245
phloem 285, 349
phosphoenolpyruvate carboxylase 497
phosphoglucomutase 43
phosphoinositide pathway 497
phosphoinositide-specific phospholipase C 497
phospholipase A 431
photoperiod 223
photosynthesis 285
phytochrome 223, 461
phytohormones 97
Pichia pastoris 481
plant disease resistance 441
plants 451
plastidic 723
pollen 471
pooled PCR 687
post-transcriptional regulation 489
potassium 527
potato 43, 223, 567
potato cyst nematode 567
potato tuber 131, 795
potato virus Y 653
potentiation 609
potyvirus 653
precursor binding 771
pre-mRNA processing 63
pre-mRNA splicing 451

preprophase band 85
programmed cell death 471
promoter 415
protein complex 597
protein import 771
protein interaction 115
protein targeting 159
proton pump 245
protoplast 497
protoplast fusion 715
pumpkin 329
purification 527
pyridoxal 5′-phosphate 747

ratio hypothesis 279
Rb 73
recombinase-mediated translocation 715
red/far-red 461
redox regulation 723
regulation 143, 795
resistance gene 183, 567
resistance 735
retrotransposon 291
Rhizobium 97
rice 319, 415, 451
root development 97
root respiration 623
root tissue 171

Saccharomyces cerevisiae 375
saccharopine dehydrogenase 195
salicylate hydroxylase (nahG) 305
salicylic acid 305, 609, 677
salt 319
Sar 1 GTPase 517
sec mutants 159
seed 29
seed dormancy 363
self-incompatibility 471
sense transformation 215
sequencing 557
serine/threonine phosphatases 85
signal transduction 441, 461
signalling 785
signalling factors 677
Silene latifolia 633
SIPK 339
sis 587
site-specific recombination 423
small heat-shock proteins 703
Snf1-related protein kinases 115
Solanum dulcamara 329
splicing mutants 451
stamens 407
starch 29, 43, 795
storage protein 415
stress 267
stress tolerance 319
sucrose phosphate synthase 759
sucrose 795
sugar 29, 587, 623
sugar response 577
sugar signalling 577
sulphate transport 171
sulphate uptake 171
sulphur assimilation 171
sun mutant 577
SUPERMAN gene 407
suppressors of *snf4* 115
systemic acquired resistance 205

TAC 687
telomerase 633
telomere 633
tetracycline-inducible expression 363
tetramerization 527
thamatin-like 375
tissue culture 291
tobacco 431, 663
Toc complex 771
Toc34 771
tomato 735
transcription 143, 339
transfer layer 29
transformation 329
transgene 143
transgenic plants 195, 279
translation 339
transposition 291
transposon tagging 557
trimethylsilylation 131
tryptophan fluorescence 703
Tto1 291
tuber 43
tuberisation 223

uridine nucleotides 795
UV-B 255

vascular gene expression 183
vesicular traffic 517
viral vector 539
virus gene expression vector 547
virus resistance 653

water stress 481
waxy gene 451
whole mount 697
whole-mount immunolabeling 349
WIPK 339

xylem 663

yeast two-hybrid system 115

Zea mays 557

THE plant JOURNAL

VOLUME 23

Editors

Thomas Altmann
Dianna Bowles
Jeff Dangl
Jean Dénarié
Jérôme Giraudat
Harry Klee
Maarten Koornneef
Cathie Martin
Gregory Martin
Julian Schroeder
Kazuo Shinozaki
Mark Stitt

Published by Blackwell Science Ltd,
in association with the Society for Experimental Biology

© 2000 Blackwell Science Ltd and the Society for Experimental Biology. Authorization to photocopy for internal or personal use or the internal or personal use of specific clients is granted by Blackwell Science Ltd and the Society for Experimental Biology for libraries and other users registered with the Copyright Clearance Centre (CCC) Transactional Reporting Service, provided that the base fee of $15.00 per copy is paid directly to the CCC, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, USA. This consent does not extend to other kinds of copying, such as copying for general distribution for advertising or promotional purposes, for creating new collective works or for resale. Special requests should be addressed to the Chief Editor.
0960-7412/00 $15.00.

Published by Blackwell Science Ltd, in association with the Society for Experimental Biology

Blackwell Science Ltd

Osney Mead, Oxford OX2 0EL, UK
25 John Street, London WC1N 2BL, UK
23 Ainslie Place, Edinburgh EH3 6AJ, UK

Blackwell Science Inc., Commerce Place, 350 Main Street, Malden, MA 02148-5018, USA
Blackwell Science Asia, 54 University Street, Carlton South, Victoria 3053, Australia
Blackwell Wissenschafts-Verlag GmbH, Kurfürstendamm 57, 10707 Berlin, Germany
Blackwell Science KK, MG-Kodenmacho Building, 7–10 Kodenmacho Nihombashi, Cho-ku, Tokyo 103-0001, Japan
Blackwell Science Ltd, 10 rue Casimir Delavigne, 75006 Paris, France

ISSN 0960-7412

Typeset and printed by Information Press Ltd, Oxford, UK.

Contents

Number 1 July 2000

v **Introduction to this Special Issue**

1 **The early years.** *M. Van Montagu*

3 **Ten years dedicated to the Laboratory of Genetics, Gent.** *M. Holsters and M. Zabeau*

7 **Jeff Schell in Cologne.** *P. Starlinger*

11 REVIEW
The transfer of DNA from *Agrobacterium tumefaciens* into plants: a feast of fundamental insights. *J. Zupan, T.R. Muth, O. Draper and P. Zambryski*

29 ***rfg1*, a mutation reducing grain filling in maize through effects on basal endosperm and pedicel development.** *M. Maitz, G. Santandrea, Z. Zhang, S. Lal, L.C. Hannah, F. Salamini and R.D. Thompson*

43 **Antisense inhibition of plastidial phosphoglucomutase provides compelling evidence that potato tuber amyloplasts import carbon from the cytosol in the form of glucose-6-phosphate.** *E. Tauberger, A.R. Fernie, M. Emmermann, A. Renz, J. Kossman, L. Willmitzer and R.N. Trethewey*

55 **Comparative genome analysis reveals extensive conservation of genome organisation for *Arabidopsis thaliana* and *Capsella rubella*.** *A. Acarkan, M. Roßberg, M. Koch and R. Schmidt*

63 **Developmentally and transgene regulated nuclear processing of primary transcripts of *chalcone synthase A* in petunia.** *M. Metzlaff, M. O'Dell, R. Hellens and R.B. Flavell*

73 **Cell cycle function of a *Medicago sativa* A2-type cyclin interacting with a PSTAIRE-type cyclin-dependent kinase and a retinoblastoma protein.** *F. Roudier, E. Fedorova, J. Györgyey, A. Feher, S. Brown, A. Kondorosi and E. Kondorosi*

85 **Inhibition of serine/threonine-specific protein phosphatases causes premature activation of cdc2MsF kinase at G2/M transition and early mitotic microtubule organisation in alfalfa.** *F. Ayaydin, E. Vissi, T. Mészáros, P. Miskolczi, I. Kovács, A. Fehér, V. Dombrádi, F. Erdödi, P. Gergely and D. Dudits*

97 **Short root mutant of *Lotus japonicus* with a dramatically altered symbiotic phenotype.** *J. Wopereis, E. Pajuelo, F.B. Dazzo, Q. Jiang, P.M. Gresshoff, F.J. de Bruijn, J. Stougaard and K. Szczyglowski*

115 **Functional identification of an *Arabidopsis* Snf4 ortholog by screening for heterologous multicopy suppressors of *snf4* deficiency in yeast.** *T. Kleinow, R. Bhalerao, F. Breuer, M. Umeda, K. Salchert and C. Koncz*

123 SHORT COMMUNICATION
Cell division events are essential for embryo patterning and morphogenesis: studies on dominant-negative *cdc2aAt* mutants of *Arabidopsis*. *A.S. Hemerly, P.C.G. Ferreira, M. Van Montagu, G. Engler and D. Inzé*

131 TECHNICAL ADVANCE
Simultaneous analysis of metabolites in potato tuber by gas chromatography–mass spectrometry. *U. Roessner, C. Wagner, J. Kopka, R.N. Trethewey and L. Willmitzer*

143 TECHNICAL ADVANCE
The DNA-binding activity of Gal4 is inhibited by methylation of the Gal4 binding site in plant chromatin. *L. Gälweiler, R.S. Conlan, P. Mader, K. Palme and I. Moore*

Number 2 July 2000

159 ***In vivo*** **targeting of a sunflower oil body protein in yeast secretory (*sec*) mutants.** *F. Beaudoin, B.M. Wilkinson, C.J. Stirling and J.A. Napier*

171 **The roles of three functional sulphate transporters involved in uptake and translocation of sulphate in *Arabidopsis thaliana*.** *H. Takahashi, A. Watanabe-Takahashi, F.W. Smith, M. Blake-Kalff, M.J. Hawkesford and K. Saito*

183 **Expression of the *Fusarium* resistance gene *I-2* colocalizes with the site of fungal containment.** *J.J. Mes, A.A. van Doorn, J. Wijbrandi, G. Simons, B.J.C. Cornelissen and M.A. Haring*

195 **A novel composite locus of *Arabidopsis* encoding two polypeptides with metabolically related but distinct functions in lysine catabolism.** *G. Tang, X. Zhu, X. Tang and G. Galili*

205 **Conversion of compatible plant–pathogen interactions into incompatible interactions by expression of the *Pseudomonas syringae* pv. *syringae* 61 *hrmA* gene in transgenic tobacco plants.** *S. Shen, Q. Li, S.-Y. He, K.R. Barker, D. Li and A.G. Hunt*

215 **Sense transformation reveals a novel role for class I β-1,3-glucanase in tobacco seed germination.** *G. Leubner-Metzger and F. Meins Jr*

223 **Phytochrome A resets the circadian clock and delays tuber formation under long days in potato.** *M.J. Yanovsky, M. Izaguirre, J.A. Wagmaister, C. Gatz, S.D. Jackson, B. Thomas and J.J. Casal*

233 **Comparative physical mapping of segments of the genome of *Brassica oleracea* var. *albogiabra* that are homoeologous to sequenced regions of chromosomes 4 and 5 of *Arabidopsis thaliana*.** *C.M. O'Neill and I. Bancroft*

245 **Proton extrusion is an essential signalling component in the HR of epidermal single cells in the barley–powdery mildew interaction.** *F. Zhou, C.H. Andersen, K. Burhenne, P. Hertz Fischer, D.B. Collinge and H. Thordal-Christensen*

255 **Replication of chloroplast, mitochondrial and nuclear DNA during growth of unirradiated and UVB-irradiated *Arabidopsis* leaves.** *C.K. Draper and J.B. Hays*

267 **Cell-type-specific calcium responses to drought, salt and cold in the *Arabidopsis* root.** *E. Kiegle, C.A. Moore, J. Haseloff, M.A. Tester and M.R. Knight*

279 SHORT COMMUNICATION
Transgenic tobacco plants co-expressing *Agrobacterium iaa* and *ipt* genes have wild-type hormone levels but display both auxin- and cytokinin-overproducing phenotypes. *S. Eklöf, C. Åstot, F. Sitbon, T. Moritz, O. Olsson and G. Sandberg*

285 SHORT COMMUNICATION
Developmental and light-dependent regulation of a phloem-localised K^+ channel of *Arabidopsis thaliana*. *R. Deeken, C. Sanders, P. Ache and R. Hedrich*

291 TECHNICAL ADVANCE
Efficient insertion mutagenesis of *Arabidopsis* by tissue culture-induced activation of the tobacco retrotransposon *Tto1*. *H. Okamoto and H. Hirochika*

Number 3 August 2000

305 **Salicyclic acid is not required for *Cf-2*- and *Cf-9*-dependent resistance of tomato to *Cladosporium fulvum*.** *P.A. Brading, K.E. Hammond-Kosack, A. Parr and J.D.G. Jones*

319 **Over-expression of a single Ca^{2+}-dependent protein kinase confers both cold and salt/drought tolerance on rice plants.** *Y. Saijo, S. Hata, J. Kyozuka, K. Shimamoto and K. Izui*

329 **Induction of dwarfism in transgenic *Solanum dulcamara* by over-expression of a gibberellin 20-oxidase cDNA from pumpkin.** *I.S. Curtis, D.A. Ward, S.G. Thomas, A.L. Phillips, M.R. Davey, J.B. Power, K.C. Lowe, S.J. Croker, M.J. Lewis, S.L. Magness and P. Hedden*

339 **Multiple levels of tobacco WIPK activation during the induction of cell death by fungal elicitins.** *S. Zhang, Y. Liu and D.F. Klessig*

349 **Vascular invasion routes and systemic accumulation patterns of tobacco mosaic virus in *Nicotiana benthamiana*.** *N.-H. Cheng, C.-L. Su, S.A. Carter and R.S. Nelson*

363 **Ectopic expression of a tomato 9-*cis*-epoxycarotenoid dioxygenase gene causes over-production of abscisic acid.** *A.J. Thompson, A.C. Jackson, R.C. Symonds, B.J. Mulholland, A.R. Dadswell, P.S. Blake, A. Burbidge and I.B. Taylor*

375 **Fungal cell wall phosphomannans facilitate the toxic activity of a plant PR-5 protein.** *J.I. Ibeas, H. Lee, B. Damsz, D.T. Prasad, J.M. Pardo, P.M. Hasegawa, R.A. Bressan and M.L. Narasimhan*

385 **The *CYTOKININ-HYPERSENSITIVE* genes of *Arabidopsis* negatively regulate the cytokinin-signaling pathway for cell division and chloroplast development.** *M. Kubo and T. Kakimoto*

395 **DNA-interactions and nuclear localisation of the chromosomal HMG domain protein SSRP1 from maize.** *K. Röttgers, N.M. Krohn, J. Lichota, C. Stemmer, T. Merkle and K.D. Grasser*

407 SHORT COMMUNICATION
Suppression of cell expansion by ectopic expression of the *Arabidopsis SUPERMAN* gene in transgenic petunia and tobacco. *M.M. Kater, J. Franken, A. van Aelst and G.C. Angenent*

415 SHORT COMMUNICATION
Quantitative nature of the Prolamin-box, ACGT and AACA motifs in a rice glutelin gene promoter: minimal *cis*-element requirements for endosperm-specific gene expression. *C-Y. Wu, H. Washida, Y. Onodera, K. Harada and F. Takaiwa*

423 TECHNICAL ADVANCE
FLP-mediated recombination for use in hybrid plant production. *H. Luo, L.A. Lyznik, D. Gidoni and T.K. Hodges*

Number 4 August 2000

431 **Soluble phospholipase A_2 activity is induced before oxylipin accumulation in tobacco mosaic virus-infected tobacco leaves and is contributed by patatin-like enzymes.** *S. Dhondt, P. Geoffroy, B.A. Stelmach, M. Legrand and T. Heitz*

441 **The *RPM1* plant disease resistance gene facilitates a rapid and sustained increase in cytosolic calcium that is necessary for the oxidative burst and hypersensitive cell death.** *M. Grant, I. Brown, S. Adams, M. Knight, A. Ainslie and J. Mansfield*

451 ***dull*: rice mutants with tissue-specific effects on the splicing of the *waxy* pre-mRNA.** *M. Isshiki, M. Nakajima, H. Satoh and K. Shimamoto*

461 ***SRL1*: a new locus specific to the phyB-signaling pathway in *Arabidopsis*.** *E. Huq, Y. Kang, K.J. Halliday, M. Qin and P.H. Quail*

471 **Evidence for DNA fragmentation triggered in the self-incompatibility response in pollen of *Papaver rhoeas*.** *N.D. Jordan, F.C.H. Franklin and V.E. Franklin-Tong*

481 **Abscisic aldehyde oxidase in leaves of *Arabidopsis thaliana*.** *M. Seo, H. Koiwai, S. Akaba, T. Komano, T. Oritani, Y. Kamiya and T. Koshiba*

489 **Constitutive expression of a putative high-affinity nitrate transporter in *Nicotiana plumbaginifolia*: evidence for post-transcriptional regulation by a reduced nitrogen source.** *V. Fraisier, A. Gojon, P. Tillard and F. Daniel-Vedele*

497 **An increase in phosphoinositide-specific phospholipase C activity precedes induction of C_4 phosphoenolpyruvate carboxylase phosphorylation in illuminated and NH_4Cl-treated protoplasts from *Digitaria sanguinalis*.** *S. Coursol, N. Giglioli-Guivarc'h, J. Vidal and J-N. Pierre*

507 **Developmental and light-regulated post-translational control of 3-hydroxy-3-methylglutaryl-CoA reductase levels in potato.** *K.L. Korth, D.A.W. Jaggard and R.A. Dixon*

517 **A dominant negative mutant of Sar1 GTPase inhibits protein transport from the endoplasmic reticulum to the Golgi apparatus in tobacco and *Arabidopsis* cultured cells.** *M. Takeuchi, T. Ueda, K. Sato , H. Abe, T. Nagata and A. Nakano*

527 **Biochemical characterization of the *Arabidopsis* K^+ channels KAT1 and AKT1 expressed or co-expressed in insect cells.** *S. Urbach, I. Chérel, H. Sentenac and F. Gaymard*

539 TECHNICAL ADVANCE
Development of clover yellow vein virus as an efficient, stable gene-expression system for legume species. *C. Masuta, T. Yamana, Y. Tacahashi, I. Uyeda, M. Sato, S. Ueda and T. Matsumura*

547 TECHNICAL ADVANCE
A plant virus vector for systemic expression of foreign genes in cereals. *I-R. Choi, D.C. Stenger, T..I. Morris and R. French*

557 TECHNICAL ADVANCE
Identification of transposon-tagged genes by the random sequencing of *Mutator*-tagged DNA fragments from *Zea mays*. *S. Hanley, D. Edwards, D. Stevenson, S. Haines, M. Hegarty, W. Schuch and K.J. Edwards*

Number 5 September 2000

567 **Homologues of a single resistance-gene cluster in potato confer resistance to distinct pathogens: a virus and a nematode.** *E.A.G. van der Vossen, J.N.A.M. Rouppe van der Voort, K. Kanyuka, A. Bendahmane, H. Sandbrink, D.C. Baulcombe, J. Bakker, W.J. Stiekema and R.M. Klein-Lankhorst*

577 **The *Arabidopsis SUCROSE UNCOUPLED-6* gene is identical to *ABSCISIC ACID INSENSITIVE-4*: involvement of abscisic acid in sugar responses.** *C. Huijser, A. Kortstee, J. Pego, P. Weisbeek, E. Wisman and S. Smeekens*

587 **The *Arabidopsis* sugar-insensitive mutants *sis4* and *sis5* are defective in abscisic acid synthesis and response.** *R.J. Laby, M.S. Kincaid, D. Kim and S.I. Gibson*

597 **A gain-of-function phenotype conferred by over-expression of functional subunits of the COP9 signalosome in *Arabidopsis*.** *D. Kang, X. Wang, K. Cao, C. Sun, X.-W. Deng and N. Wei*

609 **A loss of resistance to avirulent bacterial pathogens in tobacco is associated with the attenuation of a salicylic acid-potentiated oxidative burst.** *L.A.J. Mur, I.R. Brown, R.M. Darby, C.S. Bestwick, Y.-M. Bi, J.W. Mansfield and J. Draper*

623 **The alternative oxidase in roots of *Poa annua* after transfer from high-light to low-light conditions.** *F.F. Millenaar, R. Roelofs, M.A. González-Meler, J.M. Siedow, A.M. Wagner and H. Lambers*

633 **Analysis of the G-overhang structures on plant telomeres: evidence for two distinct telomere architectures.** *K. Riha, T.D. McKnight, J. Fajkus, B. Vyskot and D.E. Shippen*

643 **The *Arabidopsis AtEPR1* extensin-like gene is specifically expressed in endosperm during seed germination.** *B. Dubreucq, N. Berger, E. Vincent, M. Boisson, G. Pelletier, M. Caboche and L. Lepiniec*

653 **An *Ry*-mediated resistance response in potato requires the intact active site of the Nla proteinase from potato virus Y.** *P. Mestre, G. Brigneti and D.C. Baulcombe*

663 **Characterization of *cis*-elements required for vascular expression of the *Cinnamoyl CoA Reductase* gene and for protein–DNA complex formation.** *E. Lacombe, J. Van Doorsselaere, W. Boerjan, A.M. Boudet and J. Grima-Pettenati*

677 **Salicyclic acid has a role in regulating gene expression during leaf senescence.** *K. Morris, S.A-.H. Mackerness, T. Page, C.F. John, A.M. Murphy, J.P. Carr and V. Buchanan-Wollaston*

687 TECHNICAL ADVANCE
Development of an efficient maintenance and screening system for large-insert genomic DNA libraries of hexaploid wheat in a transformation-competent artificial chromosome (TAC) vector. *Y.-G. Liu, K. Nagaki, M. Fujita, K. Kawaura, M. Uozumi and Y. Ogihara*

697 TECHNICAL ADVANCE
***In situ* analysis of RNA and protein expression in whole mounts facilitates detection of floral gene expression dynamics.** *S. Zachgo, M.-C. Perbal, H. Saedler and Z. Schwarz-Sommer*

Number 6 September 2000

703 **Chaperone activity of tobacco HSP18, a small heat shock protein, is inhibited by ATP.** *P. Smýkal, J. Mašín, I. Hrdý, I. Konopásek and V. Žárský*

715 **Cre-*lox* site-specific recombination between *Arabidopsis* and tobacco chromosomes.** *H.A. Koshinsky, E. Lee and D.W. Ow*

723 **Molecular characterization of a novel glucose-6-phosphate dehydrogenase from potato (*Solanum tuberosum* L.).** *U.K. Wendt, I. Wenderoth, A. Tegeler and A. von Schaewen*

735 **Specific HR-associated recognition of secreted proteins from *Cladosporium fulvum* occurs in both host and non-host plants.** *R. Laugé, P.H. Goodwin, P.J.G.M. de Wit and M.H.A.J. Joosten*

747 **Transgenic potato plants reveal the indispensable role of cystathionine β-lyase in plant growth and development.** *S. Maimann, C. Wagner, O. Kreft, M. Zeh, L. Willmitzer, R. Höfgen and H. Hesse*

759 **Decreased expression of two key enzymes in the sucrose biosynthesis pathway, cytosolic fructose-1,6-bisphosphatase and sucrose phosphate synthase, has remarkably different consequences for photosynthetic carbon metabolism in transgenic *Arabidopsis thaliana*.** *Å. Strand, R. Zrenner, S. Trevanion, M. Stitt, P. Gustafsson and P. Gardeström*

771 **Functional analysis of the two *Arabidopsis* homologues of Toc34, a component of the chloroplast protein import apparatus.** *M. Gutensohn, B. Schulz, P. Nicolay and U.-I. Flügge*

785 **Early steps in cold sensing by plant cells: the role of actin cytoskeleton and membrane fluidity.** *B.L. Örvar, V. Sangwan, F. Omann and R.S. Dhindsa*

795 **Diurnal changes in sucrose, nucleotides, starch synthesis and *AGPS* transcript in growing potato tubers that are suppressed by decreased expression of sucrose phosphate synthase.** *P. Geigenberger and M. Stitt*

807 **LKP1 (LOV kelch protein 1): a factor involved in the regulation of flowering time in Arabidopsis.** *T. Kiyosue and M. Wada*

817 TECHNICAL ADVANCE
***In vivo* imaging of an elicitor-induced nitric oxide burst in tobacco.** *I. Foissner, D. Wendehenne, C. Langebartels and J. Durner*

825 **Author Index**

831 **Subject Index**